

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of producing a porous glass-particle-deposited body, the method comprising the steps of:

(a) synthesizing glass particles with a flame issuing from a burner, the flame having a center portion for synthesizing glass particles; and

(b) depositing the glass particles on the surface of a starting member (the surface is referred to as the glass particle deposition surface);

the method being specified by the condition that the glass particle deposition surface has:

(c) a region that is hit by the center portion of the flame; and

(d) another region that has a temperature higher than that of the region hit by the center portion of the flame and that is located at the outside of the region hit by the center portion of the flame.

2. (Currently Amended) A method of producing a porous glass-particle-deposited body as defined by claim 1, wherein:

(a) the burner for synthesizing glass particles comprises:

(a1) a port for feeding a material gas placed at the center of the burner;

(a2) a port for feeding a combustible gas comprising hydrogen; and

(a3) at least two ports, each having a tubular boundary for feeding only a combustion-assisting gas comprising oxygen and not the combustible gas, the at least two ports placed such that:

(a3a) at least one virtual concentric circle is drawn with respect to the port for feeding ~~[[a]]~~ the material gas; and

(a3b) the at least two ports for feeding ~~[[a]]~~ the combustion-assisting gas are placed on ~~the or~~ each virtual concentric circle; and

(b) the burner is specified by the condition that the sum of the cross-sectional areas of the at least two ports for feeding ~~[[a]]~~ the combustion-assisting gas is 1.7 to 5.5 times the cross-sectional area of the port for feeding ~~[[a]]~~ the material gas.

3. (Previously Presented) A method of producing a porous glass-particle-deposited body as defined by claim 2, wherein

the flow velocity of the combustion-assisting gas at all of the at least two ports for feeding a combustion-assisting gas is at least 0.7 times and less than 2.0 times the flow velocity of the material gas at the port for feeding a material gas.

4. (Previously Presented) A method of producing a porous glass-particle-deposited body as defined by claim 2 or 3, wherein

the flow velocity of the material gas at the port for feeding a material gas is decreased as a diameter of the porous glass-particle-deposited body being formed increases.

5. (Currently Amended) A method of producing a porous glass-particle-deposited body as defined by claim 1, wherein

the distance between the glass particle deposition surface and the top of the burner for synthesizing glass particles is within a range of 150 to 500 mm at the start of the deposition of the glass particles.

6. (Withdrawn) A burner for synthesizing glass particles, comprising:
    - (a) a port for feeding a material gas placed at the center of the burner;
    - (b) a port for feeding a combustible gas; and
    - (c) at least two tubular ports for feeding a combustion-assisting gas placed such that:
      - (c1) at least one virtual concentric circle is drawn with respect to the port for feeding a material gas; and
      - (c2) at least two tubular ports for feeding a combustion-assisting gas are placed on the or each virtual concentric circle;
- the burner being specified by the condition that the sum of the cross-sectional areas of the tubular ports for feeding a combustion-assisting gas is 1.7 to 5.5 times the cross-sectional area of the port for feeding a material gas.